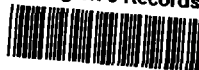


STATE OF ILLINOIS)
)
COUNTY OF WILLIAMSON) SS.

EPA Region 5 Records Ctr.



382820

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

OLIN CORPORATION,)	
)	
Petitioner,)	
)	
vs.)	PCB 75-333
)	
ENVIRONMENTAL PROTECTION AGENCY,)	
)	
Respondent.)	

R E C O M M E N D A T I O N

NOW COMES the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (hereinafter "Agency") with its report of investigation and recommendation in the above-entitled matter.

INTRODUCTION

1. On August 26, 1975 the Agency received a petition for variance from Olin Corporation (hereinafter Olin) which would permit it to burn explosive wastes in its pyrotechnic destructor incinerator (hereinafter "destructor") for one year by granting relief from Air Pollution Control Regulations, Rule 104, Rule 203(e), and Rule 206(b). After the Illinois Pollution Control Board (hereinafter "Board") pointed out that the petition lacked information pertaining to the effect of Petitioner's carbon monoxide (CO) emission on area ambient air quality, Petitioner filed an "Amended Petition for Variance", received by the Agency on October 15, 1975. Pursuant to Illinois Pollution Control Board Procedural

Rule 408, the ninety (90) day period by which the Board must render a final decision in this matter commenced October 15, 1975.

History

2. Olin has been before the Pollution Control Board several times since 1971 as a result of problems concerning disposal of pyrotechnic and explosive waste (see PCB 71-60, 6/28/71; PCB 71-231, 2/18/72; PCB 72-357, 10/31/72; PCB 72-517, 3/22/73; PCB 73-395, 12/13/73; and PCB 74-335, 1/2/75). Olin presently operates its pyrotechnic incinerator under a variance granted from Rules 104, 203(e) and 206(b) of Chapter 2 of the Pollution Control Board Rules, which shall expire December 5, 1975.

Description of Facility

3. Olin is incorporated in the State of Virginia and duly registered in Illinois. The official Illinois agent is the C.T. Corporation System located at 208 South LaSalle Street in Chicago. Olin is responsible for the manufacturing of various propellant and pyrotechnic products at a facility located within Williamson County, near Marion, Illinois. In accordance with the terms of its prior variances, Petitioner has designed and built a destructor for the disposal of its explosive wastes. Petitioner estimates that its maximum weekly amounts of hazardous explosives waste generated from machine cleaning, floor sweeping, and rejected products will be:

Ammonium Nitrate Propellant	500 lb.
Double Base Propellant	300 lb.
RDX Type Explosive	200 lb.
Single Base Propellant	20 lb.
Ammonium Perchlorate Propellant	20 lb.
Boron-Potassium Nitrate Propellant	200 lb.
Black Powder	10 lb.
Nitroglycerin in Sawdust	25 lb.
Potassium Perchlorate Propellant	20 lb.
Fire Cracker Mix	50 lb.
Colored Smoke Mix	100 lb.
Contaminated Packaging	200 lb.
Pyrotechnic Flare Scrap	50 lb.

Petitioner's destructor is constructed on a 290 acre plot of spoil lands from strip mining operations conducted in the past. (Exhibit A) The nearest residence to Olin's destructor is .5 miles north, while the town of Marion is located 1.5 miles to the north.

Relief Sought

4. Olin now seeks to extend its variance so that it may continue its use of its pyrotechnic incinerator whose emissions exceed the allowable limits of Chapter 2, Rules 203(e) and 206(b). Such variance is sought for a period of one year. In addition, Olin seeks a variance from Rule 104, which requires a compliance program and project completion schedule, during such time as the Board considers Olin's petition to amend the regulations.

5. Rule 203(e)(4) allows no more than .1 grain per standard cubic foot of effluent gases corrected to 12% carbon dioxide. Though Olin emits only .0404 grains/scf with .04% carbon dioxide, it emits 1.21 grains/scf when corrected to 12% carbon dioxide.

6. Rule 206(b) prohibits the emission of carbon monoxide (CO) over 500 ppm corrected to 50% excess air. Thus, the application of the 50% excess air factor provided in Rule 206(b) indicates that Olin's CO emissions will violate the standard since the application of this formula results in infinite CO emissions.

INVESTIGATION

7. Initially, Olin obtained a variance from the Board in order to open burn pyrotechnic and explosive wastes while controlled methods of thermal destruction were investigated. Eventually, Olin developed a novel experimental combustion device, a pyrotechnic destructor. The destructor's operation causes emissions in excess of Rule 206(b) of Chapter 2 in part because the thermal destruction process utilizes large volumes of air which rapidly lowers the temperature of incineration. Thus, carbon monoxide emissions are much greater than from ordinary incinerators, because of the large volume of air required to pull the emissions through the scrubbing equipment. The emissions in excess of Rule 203(e) standards are caused because the wastes that Olin is disposing are low carbon wastes. Therefore, a very small percentage carbon dioxide (CO₂) is emitted. However, when the CO₂ emissions are adjusted to 12% excess air, as required by Rule 203(c), particulate emission standards are exceeded.

8. On September 13, 1974, Paul Schmierbach, Agency representative visited the Olin plant to observe the operations of the destructor. During the visit he found the emissions to be 5-10% opaque, and he found all operations to be in order. The Agency has no information presently to indicate that Olin has failed to abide fully with the prior orders of the Board.

9. The Agency calculates that the actual carbon monoxide emissions from the destructor approach .05 cubic feet/lb. of scrap burned, and that the particulate emissions are approximately 45.1 grains per pound of scrap burned. It should also be noted that Olin's operation results in the removal of 99.4% by weight of the particulate emissions.

10. The Agency believes that the existing emission standards may not be suited for application to Olin's destructor. On May 30, 1975 Olin filed a petition for a Rule change with the Board (PCB R75-13), which has not yet been set for hearing. The Agency has not yet evaluated Olin's proposal. However, a preliminary analysis of this situation indicates a rule change may be in order.

CONSIDERATIONS

11. Olin Corporation has continued to act in good faith in trying to solve its waste disposal problem. Further, the pyrotechnic destructor represents the state of the art for elimination of low carbon, highly inflammable wastes as produced by Olin. Therefore, to deny a variance at this point in time when there is a lack of technical feasibility for a better control scheme would be to place an unreasonable hardship on Olin.

RECOMMENDATION

12. Therefore, the Agency recommends that Olin Corporation be granted a variance from Rules 203(e), 206(b) and 104 of the Pollution Control Board Rules and Regulations. However, in the event a Rule change is adopted by the Board pursuant to PCB R75-13, the variance shall terminate thirty (30) days after that adoption date.

The Agency further recommends that the order should be subject to the following conditions:

- a. Olin Corporation shall make application for an operating permit from the Agency for its pyrotechnic destructor within 28 days of the Board Order, and secure said operating permit within 118 days of Board Order.
- b. Olin Corporation shall not open burn any explosive or pyrotechnic wastes unless the time period for storage of said wastes creates unreasonable safety hazards, in which case Olin may open burn upon prior written approval from the Agency.
- c. Olin Corporation shall not operate its pyrotechnic destructor to exceed the maximum scrap incinerating rate of 400 pounds per hour in any one hour.

The Agency reserves the right to amend its Recommendation pending the close of the record in this matter.

ENVIRONMENTAL PROTECTION AGENCY
OF THE STATE OF ILLINOIS

BY: Delbert Haschemeyer 11/12/75
DELBERT HASCHEMEYER
Assistant to the Director
For Enforcement Services

DATED: 11/12/75

OF COUNSEL: Ernest K. Nielsen
Ernest K. Nielsen, Attorney
Enforcement Section
Division of Air Pollution Control

OLIN CORPORATION vs EPA

PCB 75-333

CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT I did, on November 12, 1975 serve the attached document upon the person to whom said document is directed by placing in an envelope addressed to

Patrick O. Boyle
Legal Counsel
Olin Corporation
East Alton, Illinois 62024

with sufficient postage affixed, certified mail, return receipt requested; said envelope being deposited in the United States mail in Springfield, Illinois on November 12, 1975.

Ernest K. Nielsen
Ernest K. Nielsen, Attorney ^{att}